

CLAIMS

1. Computer apparatus for use in accessing and organising information sources, comprising:
- an interface generating module having a graphical user interface functionality adapted for generating a graphical output on a display, the graphical output depicting a plurality of nodes;
- a node arrangement software module responsive to information reflecting the relationship between said nodes adapted for arranging said nodes in a graphic representation of three dimensional space, the location of said nodes in said three dimensional space indicating relationships therebetween;
- wherein at least one node comprises a link to an information source;
- said information source being accessible by selection of said link responsive to user interaction with an input device.
2. The computer apparatus of Claim 1 wherein a relationship between at least two nodes is depicted by the relative positioning of the nodes.
3. The computer apparatus of Claim 1 wherein the interface generating module is adapted for displaying a representation of a three dimensional space comprising nodes having three dimensional co-ordinates associated therewith.
4. The computer apparatus of Claim 3 which maintains a user viewpoint within the three dimensional space and calculates graphical images as if the user were located at the user viewpoint within the three dimensional space.

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5. The computer apparatus of Claim 3 further comprising a sound generation module, the sound generation module producing a sound depending on the location in the three dimensional space relative to the user viewpoint of nodes which link to sound information sources.
6. The computer apparatus of Claim 1 wherein at least one node comprises a link to an application and selection of said link activates said application.
7. The computer apparatus of Claim 1 comprising user interface software module having a graphical user interface functionality adapted for enabling a user to perform an action selected from the list consisting of: creation of a link, creation of a node, moving of a link, moving of a node, altering of a node and altering of a link.
8. The computer apparatus of Claim 1 comprising user interface software module having a graphical user interface functionality adapted for specifying the relationship between nodes.
9. The computer apparatus of Claim 1 wherein the visual or aural appearance of a node reflects properties of the node or its information sources.
10. The computer apparatus of Claim 9 wherein the properties of the node or its information sources are selected from a list consisting of: age, ownership, importance, age of node, results of a query, frequency of use, size, type, speed of link to information source, location of information source.
11. The computer apparatus of Claim 1 wherein the appearance of a node is altered by dynamically varying the visual or aural properties or position of the node.
12. The computer apparatus of Claim 1 wherein the same node or information source appears more than once within the three dimensional space.

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13. The computer apparatus of Claim 1 adapted to highlight multiple instances of the same node or information source in response to selection of a node.
14. The computer apparatus of Claim 1 adapted to prepare a plurality of nodes from a hierarchical filing system.
15. The computer apparatus of Claim 1 adapted to automatically link information received, sent or newly created to a node.
16. The computer apparatus of Claim 15 wherein a new node is created upon receiving, sending or creating information.
17. The computer apparatus of claim 15 wherein information is received, sent or newly created in the form of a message.
18. The computer apparatus of Claim 17 wherein said message is an e-mail message.
19. The computer apparatus of Claim 1 wherein at least one information source further comprises information concerning the node.
20. The computer apparatus of Claim 1 wherein the graphical user interface functions as a computer desktop.
21. A method of controlling a graphical user interface comprising the steps of:

maintaining a database of nodes and relationships between said nodes, wherein at least one node comprises a link to an information source;

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creating a data structure comprising a model of said nodes arranged in three dimensional space in a manner depending on the relationship between said nodes; and

causing a graphic display program to prepare a visual display corresponding to said data structure.

22. The method of Claim 21 wherein a relationship between at least two nodes is depicted by the relative positioning of the nodes.
23. The method of Claim 21 wherein the graphic display program displays a representation of a three dimensional space with reference to three dimensional co-ordinates associated with each node.
24. The method of Claim 23 further comprising the step of maintaining a user viewpoint within the three dimensional space and calculating graphical images as if the user were located at the user viewpoint within the three dimensional space.
25. The method of Claim 23 further comprising the step of generating sound using a sound generation module, wherein the sound generated depends on the location in the three dimensional space relative to the user viewpoint of nodes which link to sound information sources.
26. The method of Claim 21 wherein one or more nodes comprise a link to an application and selection of said link activates said application.
27. The method of Claim 21 wherein a user can perform an action by use of a user interface, the action being selected from the list consisting of: creation of a link, creation of a node, moving of a link, moving of a node, altering of a node and altering of a link.

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28. The method of Claim 21 wherein user interface may be used to specify the relationship between nodes.
29. The method of Claim 21 wherein the visual or aural appearance of a node depends on properties of the node or information sources.
30. The method of Claim 29 wherein the properties of the node or its information sources are selected from a list consisting of: age, ownership, importance, age of node, results of a query, frequency of use, size, type, speed of link to information source, location of information source.
31. The method of Claim 21 wherein the visual appearance of a node is altered by dynamically varying the visual or aural properties or position of the node.
32. The method of Claim 21 wherein the same node or information source appears more than once within the three dimensional space.
33. The method of Claim 21 further comprising the step of highlighting multiple instances of the same node or information source in response to selection of a node.
34. The method of Claim 21 further comprising the step of preparing a plurality of nodes from a hierarchical filing system.
35. The method of Claim 21 further comprising the step of automatically linking information received, sent or newly created to a node.
36. The method of Claim 35 wherein a new node is created upon receiving, sending or creating information.

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37. The method of claim 35 wherein information is received, sent or newly created in the form of a message.
38. The method of Claim 37 wherein a message is an e-mail.
39. The method of Claim 21 wherein at least one information source further comprises information concerning the node.
40. The method of Claim 21 wherein the graphical user interface functions as a computer desktop.
41. A computer program comprising program instructions which, when loaded into a computer, will cause it to perform as the computer apparatus of Claim 1.
42. A computer program comprising program instructions which, when loaded into a computer, will cause it to carry out the method of Claim 21.
43. A computer readable media comprising the computer program of Claim 41.
44. A computer readable media comprising the computer program of Claim 42.
45. Computer apparatus for use in accessing and organising information sources, comprising:
- means for generating a graphical output on a display, the graphical output depicting a plurality of nodes;
- means for arranging said nodes in a graphic representation of three dimensional space, the location of said nodes in said three dimensional space indicating relationships between said nodes;

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~~The node comprises a link to a resource being accessible with an input device.~~

~~said information source being accessible by selection of said link responsive to user interaction with an input device.~~

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